

REMARKS

Prior to entry of this amendment, Claims 1-13 were pending in the application. Claims 14-17 are added. Hence, Claims 1-17 are pending in the application.

TERM INTERPRETATION

As a preliminary matter, the interpretation of terms is addressed. Paragraph 11 of the Action indicates that the term “object” is interpreted to be equivalent to a geometric structure in a CAD model. While this is a valid example of an object as used in the application, the claims are not limited in scope to this example. Reference to page 38, lines 15-26 of the application supports the fact that the invention is not limited to use with a CAD model, and therefore, the term “object” is not limited to the meaning described in the Action.

Paragraph 13 of the Action indicates that the term “filter objects” is interpreted to be equivalent to objects that have been sorted according to different types by a filter. This is an inaccurate interpretation. Reference to page 16, line 8 through page 17, line 12, explicitly describes that filter objects may be used to determine where the geometry of an object is to be inserted into a hierarchical tree structure. Additional support for one correct meaning of the term “filter object” is provided at page 21, line 13 through page 23, line 11; and at page 28, line 25 through page 29, line 19.

THE REJECTIONS NOT BASED ON THE PRIOR ART

Rejections under 35 U.S.C. § 112, First Paragraph

1. A PRIMA FACIE CASE OF NON-ENABLEMENT HAS NOT BEEN ESTABLISHED

In paragraphs 3, and 7-9 of the Office Action, Claims 1-13 were rejected as allegedly containing subject matter which was not described in the specification in such a way as to

enable one skilled in the art to which it pertains to make and/or use the invention. The rejections of Claims 1-13 on these grounds are respectfully traversed.

First, as a threshold issue, a prima facie case of non-enablement has not been established to support the rejection of Claims 1-13. As stated by the Federal Circuit:

When rejecting a claim under the enablement requirement of Section 112, the [Patent Office] bears an initial burden of setting forth a *reasonable explanation* as to why it believes that the scope of protection provided by the claim is not adequately enabled by the description of the invention provided in the specification of the application; ... (Emphasis added).
In re Wright, 999 F.2d 1557, 27 USPQ 2d 1510, 1513 (Fed. Cir. 1993).

Furthermore, the Federal Circuit's predecessor stated:

We note that the PTO has the burden of giving reasons, supported by the record as a whole, why the specification is not enabling ... *Showing that the disclosure entails undue experimentation is part of the PTO's initial burden.* (Emphasis added)
In re Angstadt, 537 F.2d 489, 190 USPQ 214, 219 (C.C.P.A. 1976).

A reasonable explanation, including a showing that the disclosure entails undue experimentation, was not provided in the Action. The Action appears to rely on the allegation that "the claimed apparatus is not described in a level of detail that would enable one of ordinary skill in the art to implement the claimed apparatus." It is a commonly understood concept in patent law, as stated by the CCPA, that "[n]ot every last detail is to be described, else patent specifications would turn into production specifications, which they were never intended to be." *In re Bay*, 309 F.2d, 135 USPQ 311, 316 (C.C.P.A. 1962).

Hence, due to the absence of a reasonable and substantiated explanation, the burden of establishing a prima facie case of non-enablement has not been met. Based on the foregoing, withdrawal of this rejection of Claims 1-13 is respectfully requested.

2. APPLICATION DISCLOSURE DOES ENABLE ONE SKILLED IN THE RELEVANT ART TO MAKE AND/OR USE THE INVENTION

Even though it is shown above that a prima facie case of non-enablement has not been established, in order to help expedite the positive disposition of the application, the following remarks are presented to show support in the application, pursuant to 35 U.S. C. § 112 first paragraph, for the allegedly non-enabled claim limitations.

First, it is noted that the enablement requirement of § 112 is relative to “one of ordinary skill in the art to which it pertains.” The Federal Circuit maintains that “[t]he person of ordinary skill is a hypothetical person who is presumed to be *aware of all the pertinent prior art.*” (Emphasis added) *Custom Accessories Inc. v. Jeffrey-Allan Indus.*, 807 F.2d 955, 1 USPQ 2d 1196, 1201 (Fed. Cir. 1986).

The limitations of Claims 1-13 that are alleged in the Action to be unsupported or non-enabled, along with identification of the claims to which the Action associates the respective limitations, can be summarized as:

- (1) translating the source (or first) object to a target (or second) object (Claims 1-13);
- (2) performing a first modification to the target object (or second object in the second application) (Claims 1-13);
- (3) revising said target object in said target application to reflect said second modification to said source object without removing said first modification to said target object (Claims 1-8, 12, 13);
- (4) revising said target object includes the step of revising the rendering object to reflect the second modification that was made to the CAD object without undoing the first modification to the rendering object (Claim 3);
- (5) inserting the one or more modifier stacks into the hierarchical tree structure (Claim 8);

(6) performing a second modification to the first (or source) object in the first application (Claims 9-11, 13);

(7) performing a third modification to the second object based on data generated in response to said second modification to said first object, wherein said third modification causes said second object to reflect the second modification that was made to the first object without undoing the first modification to the second object (Claims 9-11).

Each of the foregoing limitations is addressed in order, with references to enabling disclosure in the application.

(1): Page 1, line 25 through page 2, line 23; page 5, line 4 through page 6, line 23; FIG. 1; page 12, line 11 through page 15, line 21; FIG. 2; page 15, line 24 through page 25, line 3; FIG. 3; page 26, line 18 through page 37, line 14; FIGS. 6A-E, 7A-C.

(2): Page 2, lines 17-23; page 4, line 7 through page 5, line 3; page 6, line 4 through page 7, line 3; page 12, line 11 through page 15, line 21; FIG. 2; page 23, line 18 through page 24, line 8.

(3): Page 12, line 11 through page 15, line 21; FIG. 2; page 15, line 24 through page 26, line 16; page 26, line 3 through page 37, line 14; FIGS. 3-7C.

(4): Page 2, line 24 through page 5, line 3; page 6, line 4 through page 7, line 3; page 12, line 11 through page 15, line 21; FIG. 2; page 15, line 24 through page 26, line 16; page 26, line 3 through page 37, line 14; FIGS. 3-7C.

(5): Page 12, line 11 through page 15, line 21; FIG. 2; page 17, line 18 through page 26, line 16; page 23, line 18 through page 24, line 8; page 33, line 16 through page 37, line 14; FIGS. 4A, 4B, 7A-C.

(6): Page 5, line 21 through page 6, line 3; page 6, line 11 through page 7, line 3; page 12, line 11 through page 15, line 21; FIG. 2; page 23, lines 12-17; page 27, line 3 through page 37, line 14; FIGS. 5-7C.

(7): Page 2, line 24 through page 5, line 3; page 6, line 4 through page 7, line 3; page 12, line 11 through page 15, line 21; FIG. 2; page 15, line 24 through page 26, line 16; page 26, line 3 through page 37, line 14; FIGS. 3-7C.

The foregoing references to the application are presented for purposes of identifying descriptions of examples, embodiments, and/or implementations of the invention that support the claims of the application, and therefore, enable one of skill in the relevant art to make and/or use the invention. However, the foregoing references, and their explicit citation herein, do not limit the scope of Claims 1-13 beyond their plain meaning as claimed.

Applicant recognizes that the nearly 40 pages of specification are densely packed with details that may make reading the specification difficult for the casual reader. Thus, while the details provided therein would be clearly understood by one familiar with this area of technology, the same details may appear confusing or "overkill" for others not familiar with this area of technology. However, it is respectfully submitted that, even though some readers may consider the specification to provide "too many" details, the provision of such details does not constitute proper grounds for an enablement rejection.

Recall that, according to the Federal Circuit, "[t]he person of ordinary skill is a hypothetical person who is presumed to be aware of all the pertinent prior art." *Id.* Hence, one skilled in the art of translating objects between software applications that employ different formats is presumed to have knowledge of the different software applications, i.e., the source and target applications. Thus, based on a thorough reading of the preceding references to the specification and associated drawings, and the knowledge presumed of one of skill in the art,

the application does enable one skilled in the relevant art to make and/or use the invention.

Therefore, withdrawal of the rejection of Claims 1-13 is respectfully requested.

THE REJECTIONS BASED ON THE PRIOR ART

Rejections under 35 U.S.C. § 103(a)

In paragraphs 20, 29, 33, and 35 of the Office Action, Claims 1-13 were rejected as allegedly being unpatentable over Barequet in view of Wohlers. Applicant respectfully traverses the rejection of Claims 1-13.

Claim 1 explicitly recites limitations that are not taught, suggested, or motivated in the cited references. For example, Claim 1 requires:

translating the source object to a target object in a target application, wherein the target application has a format that is not supported by the source application.

The cited passage of Barequet does not teach or suggest the preceding limitation. At most, Barequet describes the *reading* of files (page 232, first paragraph under sub-heading “Importing Data Files”) and/or *recognizing* file formats (page 233, first paragraph). Barequet does not teach or suggest translating an object from one format to another different format.

With respect to the following limitation of Claim 1:

revising said target object in said target application to reflect said second modification to said source object without removing said first modification to said target object;

the Action relies on page 2 of Wohlers, which allegedly specifically teaches the foregoing limitation in references to three different products.

The cited passages of Wohlers do not teach anything beyond a general functionality of the three products, none of which include the capability recited in the foregoing limitation of Claim 1. As stated on page 1, paragraph 2 of Wohlers, the three products “permit you to read,

view, and edit STL files.” This is not a teaching or a suggestion to revise a translated object in a target application to reflect a modification to an associated source object without removing a previous modification to the target object, which provides significant advantages over prior techniques or mechanisms. A vague reference to editing functionality is not a teaching of the limitation recited in Claim 1. A prima facie case of obviousness has not been made and Claim 1 is, therefore, patentable over the references of record. Hence, withdrawal of the rejection of Claim 1 is respectfully requested.

Claims 2-8 depend from Claim 1, either directly or indirectly. Therefore, Claims 2-8 are patentable over the references of record for at least the same reasons presented with respect to Claim 1. In addition, the absence of pertinent teachings from the Barequet and Wohlers references are not cured by Krause (which the Action additionally relies on for rejection of Claims 5-8).

Furthermore, each of Claims 2-8 introduces one or more additional limitations that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case a separate discussion of those limitations is not included at this time. Withdrawal of the rejection of Claims 2-8 is, therefore, respectfully requested.

Claim 9 also comprises one or more limitations that are not taught or suggested in the cited references. For example, the Action relies on Wohlers for the teaching of the following limitation:

performing a third modification to the second object based on data generated in response to said second modification to said first object, wherein said third modification causes said second object to reflect the second modification that was made to the first object without undoing the first modification to the second object.

The following is presented in the Action, with respect to the disclosure of Wohlers and its alleged applicability to Claim 9:

- a) "Pogo 3.0 *converts* STL to DXF and OBJ, and vice versa." (Emphasis added).
- b) "Facet Pro permits you to *read* binary STL files into AutoCAD and *output* both binary and ASCII STL files." (Emphasis added).
- c) "Jim Ten Hoven of Kohler Company (Kohler, Wisconsin) wrote a short Auto LISP routine a few years ago that *reads* ASCII STL files into AutoCAD." (Emphasis added).

The foregoing excerpts are not a teaching of the foregoing limitation of Claim 9.

Furthermore, based on those excerpts, it does not appear that the products themselves would embody the limitation. Apparently, these products, taken collectively, are capable of reading an STL file, converting it to another format, and possibly outputting the original STL file and an ASCII version thereof. These processes do not teach Claim 9. Particularly, and significantly, they do not teach or suggest the incorporation of a change to a first object via a first application, into a second object which is a translated version of the first object, without undoing a prior change to the second object via a second application.

For at least the foregoing reasons, a prima facie case of obviousness has not been made and, therefore, Claim 9 is shown to be patentable over the references of record. Hence, withdrawal of the rejection of Claim 9 is respectfully requested.

Claims 10 and 11 depend from Claim 9, either directly or indirectly. Therefore, Claims 10 and 11 are patentable over the references of record for at least the same reasons presented with respect to Claim 9. In addition, each of Claims 10 and 11 introduces one or more additional limitations that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case a separate discussion of those limitations is not included at this time. Withdrawal of the rejection of Claims 10 and 11 is respectfully requested.

Claims 12 and 13 are, respectively, a computer-readable medium claim and an apparatus claim corresponding to the method of Claim 1. Therefore, Claims 12 and 13 are patentable over the cited references for at least the same reasons presented above for Claim 1. Withdrawal of the rejections of Claims 12 and 13 are, therefore, respectfully requested.

New Claims

Claims 14-17 are added to claim embodiments described in the original application. Thus, no new matter is added to the application via Claims 14-17. Furthermore, the limitation of Claims 14-17 are not taught, suggested, or motivated by any of the references of record, either singularly or in combination. Therefore, Claims 14-17 are patentable over the references of record and should proceed to allowance.

CONCLUSION

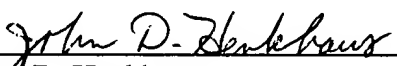
For the reasons set forth above, it is submitted that all of the pending claims (Claims 1-17) are in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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on 5/14/02 by Clare C. Perry



VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

For the paragraph beginning on page 17, line 18:

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[HIERARCHY STRUCTURE]

EXAMPLE-SOURCE OBJECT PROPERTIES

[FIG. 4 illustrates an example of a hierarchy tree structure 400 that is built by the linking mechanism based on attributes of objects that are specified in a CAD source file 402.]
FIG. 4A illustrates an example of properties that may be associated with objects contained in a CAD source file. In this example, the CAD source file 402 includes, among other things, object entries 470 and 472. Each of the object entries 470 and 472 stores data about an object, where the data is stored in a set of fields. In the illustrated embodiment, the set of fields contained by each object entry includes an object geometry field 474 and a set of object properties fields. The set of object properties fields includes a thickness property field 476, color property field 478, layer property field 480 and an ID property field 481. The object entries 470 and 472 as well as the values contained therein were generated using the CAD application.

For the paragraph beginning on page 19, line 6:

Inserting the geometries of objects into the hierarchical tree structure creates a mapping between the properties associated with the objects in the CAD application and the properties associated with objects in the visual rendering application. The geometries of objects are stored as leaves within the tree structure. FIG. 4B illustrates an example of a hierarchy tree structure that is built based on attributes of objects that are specified in a CAD source file. To insert the geometries of objects into the hierarchy tree structure 400, the CAD source file 402 is first read to identify which objects are to be inserted into the hierarchy tree structure 400. In one

embodiment, the object entries include a translation toggle 482 (FIG. 4A) that is used to indicate whether a particular object is to be inserted into the hierarchy tree structure 400. If the toggle value in an object entry is set to a particular value (e.g. “insert”) then the object’s geometry is inserted into the hierarchy tree structure 400. On the other hand, if the toggle value is set to a different value (e.g. “detached”) then the object’s geometry is not inserted into the hierarchy tree structure 400. In certain embodiments, a particular property or property value can be potentially used to determine the translation toggle value. For example, all objects that have a layer property value of “G2” can be excluded from being entered into the hierarchy tree structure 400.

For the paragraph beginning on page 20, line 1:

The hierarchy tree structure 400 includes a set of tree objects that are used to manage the links of the tree. In this example, the tree objects include a linked drawing list object 404, one or more linked drawing objects 406 and 408, a table object 410, a model space object 412, a set of collection objects 413 (layer collection objects 414 and 415, thickness collection objects 416 and 417[]), ID collection objects 418 and 419], leaf objects 420 and 421, modifier stacks 422 and 423 and nodes 424 and 425.

For the paragraph beginning on page 35, line 1:

At block [712] 713, a compare key is generated for linking the object’s geometry into the hierarchy tree structure. In one embodiment, the compare key is generated based on the selected set of filter objects. For example, referring to FIG. 4B, a compare key for entry 470 may be generated by model space collection 412 based on selected filter set 436 that includes at least the following information:

LAYER = “G1”

THICKNESS = “10”

ID = “7594”